Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CRUDE OIL

PRODUCT NUMBER(S): CPS294605 CPS294607 CPS294609 CPS294611
CPS294613 CPS294615 CPS294617 CPS294619
CPS294623 CPS294629 CPS294635 CPS294637
CPS294639 CPS294647 CPS296000 CPS296251
CPS296252 CPS296253 CPS296254 CPS296935
CPS296936 CPS296938 CPS297556 CPS301455

SYNONYM: Petroleum, Sour Crude, Sweet Crude, Heavy crude

COMPANY IDENTIFICATION

Chevron Products Company
Environment & Safety
P.O. BOX 1635
1301 McKinney
Houston, TX 77251

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr): (800)231-0623 or
(510)231-0623 (International)
TRANSPORTATION (24 hr): CHEMTREC
(800)424-9300 or (703)527-3887
Emergency Information Centers
are located in U.S.A.
Int'l collect calls accepted

PRODUCT INFORMATION: (510) 242-7131 Technical

2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % CRUDE OIL

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
CRUDE OIL Chemical Name: PETROLEUM CAS8002059	100.00%	NONE	NA

MAY CONTAIN

BENZENE
Chemical Name: BENZENE

CAS71432	0.5 ppm	ACGIH TWA
	2.5 ppm	ACGIH STEL
	1 ppm	OSHA PEL
	5 ppm	OSHA STEL
	10 LBS	CERCLA 302.4 RQ

HYDROGEN SULFIDE
Chemical Name: HYDROGEN SULFIDE

CAS7783064	10 ppm	ACGIH TWA
	15 ppm	ACGIH STEL
	Table Z-2	OSHA PEL
	Table Z-2	OSHA CEILING
	100 LBS	CERCLA 302.4 RQ
	500 LBS	SARA 302 TPQ
	100 LBS	SARA 304 RQ

POLYCYCLIC AROMATIC HYDROCARBONS

COMPOSITION COMMENT:
All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

Refer to the OSHA Benzene Standard (29 CFR 1910.1028) and Table Z-2 for detailed training, exposure monitoring, respiratory protection and medical surveillance requirements before using this product.

3. HAZARDS IDENTIFICATION

********** **EMERGENCY OVERVIEW** **********

Amber to black viscous liquid with a mild to pungent sulfurous odor.

- **FLAMMABLE LIQUID AND VAPOR**
- **MAY RELEASE HIGHLY TOXIC AND FLAMMABLE HYDROGEN SULFIDE (H2S) GAS**
- **DO NOT ATTEMPT RESCUE WITHOUT SUPPLIED-AIR RESPIRATORY PROTECTION**
- **MAY CAUSE EYE IRRITATION**
- **HARMFUL OR FATAL IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE**
- **CANCER HAZARD - CAN CAUSE CANCER**

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IMMEDIATE HEALTH EFFECTS

EYE:
The eye irritation potential of this substance has not been determined. However, it may be slightly irritating to the eyes and could cause

prolonged (days) impairment of your vision. The degree of the injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment.

SKIN:

Contact with the skin may cause irritation. Not expected to be harmful to internal organs if absorbed through the skin.

INGESTION:

May be harmful if swallowed. Also, because of its low viscosity, this material can directly enter the lungs if swallowed or subsequently vomited. Once in the lungs, it is very difficult to remove and can cause severe injury or death.

INHALATION:

The vapor or fumes from this material may cause respiratory irritation. Breathing this material at concentrations above the recommended exposure limit may cause central nervous system effects.

This material contains sulfur compounds which may form hydrogen sulfide. Hydrogen sulfide has a strong rotten-egg odor. However, with continued exposure and high levels, H2S may deaden a person's sense of smell. If rotten-egg odor is no longer noticeable, it may not necessarily mean that exposure has stopped. At low levels, hydrogen sulfide causes irritation to the eyes, nose, and throat. Moderate levels can cause headaches, dizziness, nausea, vomiting, as well as coughing and difficulty in breathing. Higher levels can cause shock, convulsions, coma, and death. After serious exposure, symptoms usually begin immediately.

SIGNS AND SYMPTOMS OF EXPOSURE:

Eye irritation: may include pain, tearing, reddening, swelling, and impaired vision. Skin irritation: may include pain, reddening, swelling, and blistering. INHALATION: Respiratory tract irritation may include, but may not be limited to, one or more of the following: nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulty in breathing. INHALATION: Central nervous system effects may include one or more of following: headache, dizziness, loss of appetite, weakness and loss of coordination.

CARCINOGENICITY:

Prolonged or repeated breathing of and/or skin contact with this material may cause cancer. Risk of cancer depends on duration and level of exposure. See Section 11 for additional information.

Contains material which appears on the following agency lists: <NTP> <IARC> Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP), and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

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4. FIRST AID MEASURES

EYE:

Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get medical attention if irritation persists.

SKIN:

Wash skin immediately with soap and water and remove contaminated clothing

and shoes. Get medical attention if irritation persists. Discard contaminated clothing and shoes or thoroughly clean before reuse.

INGESTION:

If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.

INHALATION:

Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms continue.

If exposure to hydrogen sulfide (H2S) gas is possible during emergencies, wear a NIOSH/MSHA approved positive pressure air-supplying respirator. Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

NOTE TO PHYSICIANS:

Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

Administration of 100% oxygen and supportive care is the preferred treatment for poisoning by hydrogen sulfide gas. For additional information on H2S, see Chevron MSDS No. 301.

5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Flammable liquid.

FLAMMABLE PROPERTIES:

FLASH POINT: <59 - 199+F (<15 - 93-C)
AUTOIGNITION: 536F (280C) (gasoline)
FLAMMABILITY LIMITS (% by volume in air): Lower: 1.4 Upper: 7.6 (gasoline)
EXTINGUISHING MEDIA:
CO2, Dry Chemical, Foam, Water Fog. Do not use water spray or a direct stream of water.

NFPA RATINGS: Health 1; Flammability 3; Reactivity 0.

FIRE FIGHTING INSTRUCTIONS:

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide, water vapor and may produce oxides of sulfur and nitrogen. Incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (703)527-3887
International Collect Calls Accepted

ACCIDENTAL RELEASE MEASURES:

Eliminate all sources of ignition in the vicinity of the spill or released vapor.

Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

Release of this product should be prevented from contaminating soil and water and from entering drainage and sewer systems. U.S.A. regulations require reporting spills of this material that could reach any surface waters. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802.

7. HANDLING AND STORAGE

This material presents a fire hazard. Liquid quickly evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 15F.

Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling.

Toxic quantities of hydrogen sulfide (H2S) may be present in storage tanks and bulk transport vessels which contain or have contained this material. Persons opening or entering these compartments should first determine if H2S is present. See Exposure Controls/Personal Protection -Section 8. Do not attempt rescue of a person overexposed to H2S without wearing approved supplied-air or self-contained breathing equipment.

If there is a potential for exceeding 5 ppm (one-half the PEL), monitoring of hydrogen sulfide levels is required. Since the sense of smell cannot be relied upon to detect the presence of H2S, the concentration should be measured by the use of fixed or portable devices.

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, "Flammable and Combustible Liquids", National Fire Protection Association (NFPA) 77, "Recommended Practice on

Static Electricity", and/or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents".

Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or properly disposed of.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

Use process enclosures, local exhaust ventilation, or other engineering controls to control H2S levels below the OSHA Permissible Exposure Limit (PEL) of 10 ppm. For more information on H2S, see Chevron MSDS No. 301.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION:

Wear eye protection such as safety glasses, chemical goggles, or face shields if engineering controls or work practices are not adequate to prevent eye contact.

SKIN PROTECTION:

Wear protective clothing if engineering controls or work practices are not adequate to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: <Polyvinyl Alcohol (or PVA - Note: Avoid contact with water. PVA deteriorates in water)>

RESPIRATORY PROTECTION:

No respiratory protection is normally required. Determine if airborne concentrations are below recommended exposure limits for H2S. If not, wear a NIOSH approved air-supplying respirator. Refer to the OSHA Benzene Standard to determine what type of respirator is required based on exposure levels.

Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:
Amber to black viscous liquid with a mild to pungent sulfurous odor.

pH:	NA
VAPOR PRESSURE:	0 - 14 PSIA
VAPOR DENSITY (AIR=1):	>1
BOILING POINT:	100 - 1500F and higher.
FREEZING POINT:	NA
MELTING POINT:	NA
SOLUBILITY:	Soluble in hydrocarbon solvents; insoluble in water.
SPECIFIC GRAVITY:	0.75 - 1.04
VISCOSITY:	<0.9 - >20000 cSt @ 20C

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
None.
CHEMICAL STABILITY:
Stable.
CONDITIONS TO AVOID:
No data available.
INCOMPATIBILITY WITH OTHER MATERIALS:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
HAZARDOUS POLYMERIZATION:
Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:
The eye irritation hazard is based on an evaluation of the data for the components.
SKIN EFFECTS:
The skin irritation hazard is based on an evaluation of the data for the components. The acute dermal toxicity is based on an evaluation of the data for the components.
ACUTE ORAL EFFECTS:
The acute oral toxicity is based on an evaluation of the data for the components.
ACUTE INHALATION EFFECTS:

The acute respiratory toxicity is based on an evaluation of the data for

the components.

CHRONIC EFFECTS/CARCINOGENICITY:

The International Agency for Research on Cancer (IARC) reviewed the carcinogenic potential of crude oil in 1989 and concluded that there was limited evidence for the carcinogenicity of crude oil in animals and inadequate evidence for the carcinogenicity of crude oil in humans. The basis for the findings for animals are results from studies in which crudes applied to the skin of lab animals showed benign and malignant skin tumors in some studies, but not in others.

This product may contain significant amounts of polynuclear aromatic hydrocarbons (PAH's) which have been shown to cause skin cancer after prolonged and frequent contact with the skin of test animals. Brief or intermittent skin contact with this product is not expected to have serious effects if it is washed from the skin. While skin cancer is unlikely to occur in human beings following use of this product, skin contact and breathing of mists or vapors should be reduced to a minimum.

This product contains benzene. GENETIC TOXICITY/CANCER: Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation. REPRODUCTIVE/DEVELOPMENTAL TOXICITY: No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother. However, some evidence of fetal toxicity such as delayed physical development has been seen at such levels. The available information on the effects of benzene on human pregnancies is inadequate but it has been established that benzene can cross the human placenta. OCCUPATIONAL: The OSHA Benzene Standard (29 CFR 1910.1028) contains detailed requirements for training, exposure monitoring, respiratory protection and medical surveillance triggered by the exposure level. Refer to the OSHA Standard before using this product.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

This material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE:

On release to the environment the lighter components of crude oil will generally evaporate but depending on local environmental conditions (temperature, wind, mixing or wave action, soil type, etc.) the remainder may become dispersed in the water column or absorbed to soil or sediment. Crude oil would not be expected to be "readily biodegradable".

13. DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible.

This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by USEPA under RCRA (40CFR261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: PETROLEUM CRUDE OIL
DOT HAZARD CLASS: 3 (FLAMMABLE LIQUID)
DOT IDENTIFICATION NUMBER: UN1267
DOT PACKING GROUP: N/A

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:
1. Immediate (Acute) Health Effects: YES
2. Delayed (Chronic) Health Effects: YES
3. Fire Hazard: YES
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01=SARA 313	11=NJ RTK	22=TSCA Sect 5(a)(2)
02=MASS RTK	12=CERCLA 302.4	23=TSCA Sect 6
03=NTP Carcinogen	13=MN RTK	24=TSCA Sect 12(b)
04=CA Prop 65-Carcin	14=ACGIH TWA	25=TSCA Sect 8(a)
05=CA Prop 65-Repro Tox	15=ACGIH STEL	26=TSCA Sect 8(d)
06=IARC Group 1	16=ACGIH Calc TLV	27=TSCA Sect 4(a)
07=IARC Group 2A	17=OSHA PEL	28=Canadian WHMIS
08=IARC Group 2B	18=DOT Marine Pollutant	29=OSHA CEILING
09=SARA 302/304	19=Chevron TWA	30=Chevron STEL
10=PA RTK	20=EPA Carcinogen	31=OSHA STEL

The following components of this material are found on the regulatory lists indicated.

BENZENE
is found on lists: 01,02,03,04,05,06,10,11,12,13,14,15,17,20,28,31,
HYDROGEN SULFIDE
is found on lists: 01,02,09,10,11,12,13,14,15,17,28,29,
PETROLEUM
is found on lists: 02,10,11,13,

POLYCYCLIC AROMATIC HYDROCARBONS
is found on lists: 03,06,

EU RISK AND SAFETY LABEL PHRASES:

EU SYMBOL(S): F+, T, Xn.
R11: Highly Flammable.
R45: May cause cancer.
R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65: Harmful: may cause lung damage if swallowed.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S53: Avoid exposure - obtain special instructions before use.
S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

WHMIS CLASSIFICATION:

Class B, Division 2: Flammable Liquids
Class D, Division 1, Subdivision A: Very Toxic Material
- Acute Lethality.
Class D, Division 2, Subdivision B: Toxic Material
-Skin or Eye Irritation

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16. OTHER INFORMATION

NFPA RATINGS: Health 1; Flammability 3; Reactivity 0;
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:

This revision updates Section 1 (Product Codes).

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	- Threshold Limit Value	TWA	- Time Weighted Average
STEL	- Short-term Exposure Limit	TPQ	- Threshold Planning Quantity
RQ	- Reportable Quantity	PEL	- Permissible Exposure Limit
C	- Ceiling Limit	CAS	- Chemical Abstract Service Number
A1-5	- Appendix A Categories	()	- Change Has Been Proposed
NDA	- No Data Available	NA	- Not Applicable

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology and Health Risk Assessment Unit, CRTC, P.O. Box 1627, Richmond, CA 94804
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The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may

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be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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